

Kentucky's NO_x SIP Call Plan



**prepared &
submitted by**

**Kentucky Division for Air Quality
John S. Lyons
Director**

**Kentucky Natural Resources
and Environmental and Public Protection Cabinet
LaJuana S. Wilcher James E. Bickford
Secretary**

September 2005 January 2002

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1.0

Introduction

1.1 Background

~~On October 27, 1998, the United States Environmental Protection Agency (EPA) published a final rule titled, "Finding of Significant Contribution and Rulemaking for Certain States in the Ozone Transport Assessment Group Region for Purposes of Reducing Regional Transport of Ozone" [63 FR 57355]. This rule is more commonly referred to as EPA's NOx SIP Call. The rule required Kentucky and certain other states to limit the summertime emission of oxides of nitrogen (NOx) which is one of the precursors of ozone pollution. Several states disagreed with EPA's findings under this rule and appealed EPA's action to appropriate federal courts. On March 3, 2000, the U.S. Court of Appeals for the District of Columbia Circuit ruled predominately in favor of EPA's actions and directed the States affected by EPA's NOx SIP Call to submit appropriate revisions to their State Implementation Plans.~~

The Kentucky Natural Resources and Environmental Protection Cabinet (now the Kentucky Environmental and Public Protection Cabinet), in order to comply with EPA's NOx SIP Call, submitted a final NOx SIP Call State Implementation Plan (SIP) revision to EPA on January 31, 2002 hereby submits this revision to Kentucky's State Implementation Plan. EPA approved Kentucky's NOx SIP Call SIP revision in an April 11, 2002, *Federal Register*, which became effective on June 10, 2002 [67 FR 17624]. A link to the Cabinet's January 31, 2002, NOx SIP Call SIP revision can be found at the following Division for Air Quality web site: http://www.air.ky.gov/homepage_repository/Public+Hearings.htm.

In order to comply with the NOx reduction required by the NOx SIP Call, the Cabinet, in consultation with EPA and public comment, ~~has~~ adopted six regulations, which became effective on August 15, 2001, and as amended on December 18, 2002. ~~(See Appendix A for Copies of the existing regulations are or on the internet at www.lrc.state.ky.us/kar/Title401.htm).~~ The six regulations are as follows:

- 401 KAR 51:001. Definitions for 401 KAR Chapter 51.
- 401 KAR 51:160. NOx requirements for large utility and industrial boilers.
- 401 KAR 51:170. NOx requirements for cement kilns.
- 401 KAR 51:180. NOx credits for early reduction and emergency.
- 401 KAR 51:190. Banking and trading NOx allowances.
- 401 KAR 51:195. NOx opt-in provisions.

~~(Note: 401 KAR 51:200 Regional NOx emission requirements was inadvertently listed and submitted in the October 10, 2001, submittal, and is not part of Kentucky's NOx SIP Call SIP revision. Furthermore, this regulation is to be repealed since its purpose (i.e., the Louisville attainment demonstration) is no longer relevant with the redesignation of the Louisville area to attainment.)~~

1.2 Revision to Kentucky's NOx SIP Call Plan

In order to comply with the NOx reduction required by the NOx SIP Call, the Environmental and Public Protection Cabinet hereby submits a SIP revision regarding EPA's NOx SIP Call. This revision to Kentucky's SIP addresses the following issues regarding Kentucky's NOx SIP Call Plan:

- The adoption of a new regulation to require a 82% NOx emission reduction from large stationary internal combustion engines (ICEs) as required by EPA's Phase II NOx SIP Call final rule published in the *Federal Register* on April 21, 2004, and entitled "*Interstate Ozone Transport: Response to Court Decisions on the NOx SIP Call, NOx SIP Call Technical Amendments, and Section 126 Rules*" [69 FR 21603]. The application of controls on identified ICEs will result in a revision to the large stationary ICE portion of the Non-EGU budget.
- Amendment of an existing regulation to address EPA's position related in a January 23, 2004, letter that it was optional for fluidized catalytic cracking units (FCCU) CO boilers to be subject to the NOx SIP Call. As a result of EPA's position, Kentucky's large boilers/turbines portion of the Non-EGU (non electric generating unit) NOx trading budget will be revised by removing and exempting FCCU CO boilers from the NOx SIP Call; and
- An update to SIP language to reflect the December 18, 2002, amendment to 401 KAR 51:160 that provides for the selling of a percentage of EGU NOx allocations by the Commonwealth of Kentucky beginning with the 2004-2006 allocation period and thereafter allocation periods.

1.2.1 Phase II NOx SIP Call Regarding Large ICEs

Pursuant to EPA's April 21, 2004, final rule regarding Phase II of the NOx SIP Call that requires states that submitted SIPs to meet the Phase I NOx SIP Call budgets to submit Phase II SIP revisions as needed to achieve the necessary reductions of NOx, the Kentucky Environmental and Public Protection Cabinet, in consultation with EPA is proposing to adopt the following regulation:

401 KAR 51:150. NOx requirements for stationary internal combustion engines.
(See Appendix A for copies of the regulations)

The proposed regulation (401 KAR 51:150) is proposed for adoption to require large stationary internal combustion engines (ICEs) (engines emitting > 1 ton of NOx per average ozone season day in 1997) to reduce NOx emissions by 82%.

1.2.2 Exempt FCCU CO Boilers from Being Subject to the NOx SIP Call

Pursuant to EPA's January 23, 2004, position that it is optional for FCCU CO boilers to be subject to the NOx SIP Call, the Kentucky Environmental and Public Protection Cabinet, in consultation with EPA is proposing to amend the following regulation:

401 KAR 51:160. NOx requirements for large utility and industrial boilers.

(See Appendix A for copies of the regulations)

~~401 KAR 51:160 regulates emissions from units that serve generators with a nameplate capacity equal to or greater than twenty-five (25) megawatts (MWe). These units are commonly referred to as electric generating units or EGUs. In addition to electric generating units (EGUs), 401 KAR 51:160 regulates emissions from large industrial boilers or turbines which have a maximum design heat input equal to or greater than two hundred fifty (250) MMBTU per hour that are not electric generating units. For purposes of this plan, these units are referred to as Non-EGUs. Finally, 401 KAR 51:170 regulates emissions from cement kilns. It should be noted that EPA has stated its intent to revise its rules to require controls for large stationary internal combustion engines (ICEs). When this occurs, the Cabinet intends to adopt an appropriate regulation to add controls to these sources.~~

The proposed amendment to 401 KAR 51:160 will exempt FCCU CO boilers from being subject to Kentucky's NOx SIP Call requirements. As a result, the large Non-EGU trading budget is being revised in this SIP revision. The revised Non-EGU trading budget will be utilized to provide the Non-EGU NOx allocations for the 2007-2008 allocation period.

1.2.3 Update SIP to Reflect the Selling of a Portion of EGU NOx Allocations

On December 18, 2002, the Cabinet amended 401 KAR 51:160. An amendment provided that the Commonwealth of Kentucky can sell a certain percentage of EGU NOx allocations for allocation periods beginning with the 2004-2006 allocation period and thereafter allocation periods. As a result of this regulatory amendment, Kentucky is updating the narrative of the NOx SIP Call Plan to reflect this regulatory change (See Appendix A for copies of the regulations).

1.31 Kentucky's Projected 2007 Control Period NOx Emissions (Ozone SeasonTons)

The combination of 401 KAR 51:150, 51:160, and 401 KAR 51:170 achieves all the necessary NOx reductions for Kentucky as mandated by EPA's NOx SIP Call. In light of the reductions achieved, the projected 2007 control period NOx emissions for the various categories are as follows:

Total EGU NOx Budget (Revised with corrections)	36,504
Total Non-EGU NOx Budget (Revised with corrections)	<u>26,259</u> 28,750
Total NOx Budget for Stationary Area Sources	31,807
Total NOx Budget for Nonroad Mobile Sources	15,025
Total NOx Budget for Highway Mobile Sources	53,268
Total NOx Budget for Kentucky (Revised with corrections)	<u>162,863</u> 165,354

The following plan provides details on how Kentucky proposes to meet the Phase II requirements of EPA's NOx SIP Call for large stationary internal combustion engines (ICEs), to exempt FCCU CO boilers from being subject to the NOx SIP Call per EPA's January 23, 2004, position, and to update SIP language to reflect that Kentucky sells a percentage of its EGU NOx allocations as provided in 401 KAR 51:160 as amended on December 18, 2002. Additionally, an electronic version of this plan and relevant attachments can be found on the Division for Air Quality's web site at:

http://www.air.ky.gov/homepage_repository/Public+Hearings.htm.

www.nr.state.ky.us/nrepc/dep/daq/pubinfo/calendar.html.

2.0 Kentucky's NOx Budget

2.1 EGU NOx Budget

~~Attachment 1 contains the EGU budget for Kentucky. The total EGU budget for Kentucky is thirty-six thousand five hundred four (36,504) tons. The budget for those EGUs in the trading program (controlled sources) is thirty-six thousand forty five (36,045) tons. The budget for those EGUs not in the trading program (uncontrolled sources) is four hundred fifty nine (459) tons. These numbers represent Kentucky's revised budget. The Cabinet revised the budget to reflect corrections to EPA's budget. The Cabinet included one (1) EGU that was previously omitted. The EGU budget revisions are contained in Attachment 1 and explanations are provided below.~~

Total EGU Budget (Revised)	36,504 tons
Total Budget for large EGUs (≥ 25 MWe) in the trading program	36,045 tons
Total Budget for small EGUs (< 25 MWe) not in the trading program	459 tons

2.1.1 Omitted EGU Unit Which Has Been Added to Kentucky's EGU Budget

(See Appendix B for EGU documentation)

Western Kentucky Energy (Reid Combustion Turbine) 21-233-00001, Point RT)

~~This source was omitted from EPA's EGU NOx SIP call budget and is now being included. This source was in operation in 1995 as indicated by the company's February 1999 NOx SIP Call comments.~~

2.12 Non-EGU NOx Budget

~~Appendix B Attachment 2 contains the revised Non-EGU budget for Kentucky. The revised Non-EGU budget reflects the application of 82% controls on large stationary internal combustion engines (ICEs) per EPA's April 21, 2004 NOx SIP Call Phase II final rule, and the removal and exemption of FCCU CO boilers from being subject to the NOx SIP Call per EPA's January 23, 2004, position. The total Non-EGU budget for Kentucky is twenty-six thousand two-hundred fifty-nine tons (26,259) tons revised from the January 31, 2002, submitted budget of twenty-eight thousand seven hundred fifty (28,750) tons. This budget consists of the following categories: large Non-EGUs in the trading program, small Non-EGUs not in the trading program, large cement kilns, and large internal combustion engines (ICEs). The budget for large Non-EGUs in the trading program (controlled sources) is sixty-four (64) tons revised from January 31, 2002, submitted budget of one hundred seventy-nine (179) tons due to the removal and exemption of FCCU CO boilers due to EPA's January 23, 2004, position. The budget for small Non-EGUs not in the trading program (uncontrolled sources) is twenty-four thousand five hundred twenty-seven (24,527) tons revised from the January 31, 2002, submitted budget of twenty-four thousand three hundred ninety-seven (24,397) tons. The budget for large cement kilns, which are not part of the trading program, but are controlled at 30% of their uncontrolled levels, remains unchanged at is one thousand ninety-one (1,091) tons. The final component of the Non-EGU budget is the budget for large stationary internal combustion engines (ICEs). The budget for large ICEs, which are not part of the trading program, but are to be controlled at 82% of their uncontrolled levels, is five hundred seventy-seven (577) tons revised from the January 31, 2002,~~

~~submitted uncontrolled budget of and include three thousand eighty-three (3,083) tons. The Cabinet is proposing to adopt 401 KAR 51:150 to require NOx reductions for large stationary ICEs per EPA's April 21, 2004, final rule regarding Phase II of the NOx SIP Call. This budget does not currently reflect any additional controls for these sources. However, it is EPA's intent to regulate ICEs at a later date at which point the Cabinet plans to promulgate regulations for these sources. These numbers represent Kentucky's revised Non-EGU budget.~~

~~The Cabinet's revised the Non-EGU budget to reflects corrections to EPA's budget April 21, 2004, final rule regarding Phase II NOx SIP Call reductions for large stationary internal combustion engines (ICEs), and the removal and exemption of FCCU boilers from the NOx SIP Call per EPA's January 23, 2004, position. On February 22, 1999, Kentucky provided to EPA 1997 NOx emissions for ICEs (SIC code 4922) instead of 1995 data since the Division's 1997 data was much more comprehensive. Therefore, the Division has utilized its 1997 emissions for all applicable natural gas transmission stations (SIC code 4922) in lieu of EPA's NOx SIP Call emissions. Explanations for these Changes to the Non-EGU NOx SIP Call budget are provided below (See Appendix B Attachment 2).~~

Total Non-EGU Budget (Revised)	26,259 28,750 tons
Total budget for large Non-EGUs in the trading program (Revised)	64 179 tons
Total budget for small Non-EGUs not in the trading program (Revised)	24,527 24,397 tons
Total budget for large cement kilns	1,091 tons
Total budget for large ICEs (Revised)	577 3,083 tons

2.12.1 Exempt FCCU CO Boilers from Being Subject to the NOx SIP Call Large Non-EGU Units Which Were Misidentified As Small (See Appendix B for Non-EGU documentation)

~~In a January 23, 2004, letter EPA related to Kentucky its position that it was optional for FCCU CO boilers to be subject to the NOx SIP Call (See Appendix B for Non-EGU documentation). Pursuant to EPA's January 23, 2004, position, Kentucky's proposed amendment to 401 KAR 51:160 will exempt FCCU CO boilers from being subject to Kentucky's NOx SIP Call requirements (See Appendix A for copies of the regulations). As a result, the large Non-EGU trading budget is being revised in this SIP revision by moving Marathon Ashland Petroleum's (MAP – ID# 21-019-00004) three (3) FCCU CO boilers (Units 64 and 8C North and South) to the small Non-EGU non trading portion of the NOx SIP Call budget. Per EPA's January 23, 2004, letter, NOx trading allowances currently allocated to MAP's FCCU CO boilers (Units 64 and 8C North and South) for each year during 2004-2006 are to be removed, and leave unchanged the existing allocations for the remaining Non-EGUs for 2004-2006. In addition, the revised large Non-EGU trading budget (64 ozone season tons) will be utilized to provide the Non-EGU NOx allocations for the 2007-2008 allocation period.~~

Marathon Ashland Petroleum – 21-019-0004, Point 064, Segment 02 & 03, and Point 08C Segment 03

~~The company has indicated that the capacity for Point 064 boiler is 325 MMBTU/hr, and for Point 08C's two (2) boilers is 367 MMBTU/hr each. Therefore they have been properly identified as large Non-EGUs in Kentucky's Non-EGU Budget. The Cabinet indicated this unit's status in its February 1999 NOx SIP Call comments to EPA.~~

2.2.2 Small Non-EGU Units Which Were Misidentified As Large Non-EGUs

(See Appendix B for Non-EGU documentation)

Westvaco Corp—21-007-0002, Point 009

The company has indicated that this is a primary wood (bark) boiler with less than fifty percent (50%) annual heat input for a fossil fuel and therefore is not subject to controls.

Dow Corning Corp—21-041-0004, Point 0AA

The 1995 and current listed (rated) boiler capacity for this boiler at point 0AA is 97 MMBTU/hr. The listed (rated) boiler capacity means the nameplate boiler capacity. No electric generator is associated with this Dow Corning boiler at point 0AA.

Daramic Inc. (formerly W. R. Grace & Co.)—21-059-0006, Point 004

The 1995 data submitted to EPA indicated a boiler capacity of 259 MMBTU/hr for point 004. However, this boiler capacity, which represented three separate boilers at point 004, should have indicated a combined capacity of 112 MMBTU/hr. The boiler capacities for the three boilers at point 004 was in 1995 and is currently 22.3 MMBTU/hr, 26.8 MMBTU/hr, and 63.0 MMBTU/hr. The listed (rated) boiler capacity means the nameplate capacity. None of the three boilers at point 004 have ever been attached to an electric generator.

USAARMC & Fort Knox—21-093-0022, Point 013

The 1995 data submitted to EPA indicated a boiler capacity of 700 MMBTU/hr for point 013. However, this boiler capacity represented 175 separate boilers at point 013 each with a capacity of 4 MMBTU/hr. In addition, attached is a March 27, 2000, letter from Fort Knox officials that confirms the past and current boiler status at point 13. The listed (rated) capacity means the nameplate capacity. None of the 175 boilers at point 013 have ever been attached to an electric generator. Finally, in an April 25, 2000, phone conversation with Kevin Culligan, EPA's Clean Air Markets Division, EPA indicated to Division staff that no additional information was necessary from the Kentucky Division for Air Quality to further indicate that Fort Knox should not be identified as being subject to the 126 petitions.

Air Products & Chemicals—21-157-0009, Points 0AA & 0AB

Information provided by the company indicate that the boiler at emission point 0AA is rated at 215 MMBTU/hr, and the boiler at emission point 0AB is rated for 246 MMBTU/hr., less than the 250 MMBTU/hr criteria.

Iehikoh Manufacturing—21-211-0034, Points—003, 004, and 005

This sources boiler capacity at points 003, 004 and 005 were incorrectly listed (rated) as 1000 in the Division's 1995 KYEIS database. The listed (rated) boiler capacities for points 003, 004, and 005 were actually less than 10 MMBTU/hr. for each boiler present. The listed (rated) boiler capacity means the nameplate capacity. The boilers in place in 1995 were not attached to an electric generator. As indicated in a April 25, 2000, phone conversation with Kevin Culligan, EPA Clean Air Markets Division, the boilers at points 003, 004, and 005 are no longer in operation and are not reflected in the source's Title V Operating permit that is attached. Currently, the source has no boilers and has paint spray booths and surface coating operations in their place at points 003, 004, and 005.

~~Toyota Motor MFG USA—21-209-0030, Point 0AA~~

~~The 1995 data submitted to EPA indicated a boiler capacity of 297 MMBTU/hr. However, this capacity represented six separate boilers at point, 0AA none of which were over 99 MMBTU/hr. Specifically, the point has five boilers listed (rated) at 99 MMBTU/hr and 1 boiler listed (rated) at 50 MMBTU/hr. The listed (rated) boiler capacity means the nameplate capacity. The correct total boiler capacity for the six boilers at point 0AA is 545 MMBTU/hr. None of the six boilers at point 0AA have ever been attached to an electric generator.~~

~~Texas Gas Trans Corp (Slaughters Compressor)—21-233-0074, Point 002~~

~~Division calculations indicate that the heat input for the industrial turbine at point 002 at Texas Gas is not a large Non-EGU. The heat input for the turbine at point 002 is less than 10 MMBTU/hr.~~

2.12.23 Large Stationary Internal Combustion Engines (ICE)

On April 21, 2004, the United States Environmental Protection Agency (EPA) published a final rule entitled, “Interstate Ozone Transport: Response to Court Decisions on the NO_x SIP Call, NO_x SIP Call Technical Amendments, and Section 126 Rules” [69 FR 21603]. The rule requires states that submitted plans to meet the Phase I NO_x SIP Call budgets to submit Phase II SIP revisions as needed to achieve the necessary incremental reductions of NO_x.

In order to comply with EPA’s April 21, 2004, Phase II final rule, 401 KAR 51:150 is being proposed for adoption to require large stationary internal combustion engines (ICEs) (engines emitting > 1 ton of NO_x per average ozone season day in 1997) to reduce NO_x emissions by 82%. As a result, the non trading budget for large stationary internal combustion engines (ICEs) is being revised in this SIP revision from three thousand eighty-three (3,083) uncontrolled ozone season tons to five hundred seventy-seven (577) controlled ozone season tons.

Per a July 12, 2005, conference call with EPA, the revised large ICE budget has been recalculated by:

- Utilizing the 1997 emissions for the list of large ICEs identified by the Kentucky Division for Air Quality and submitted to EPA in Kentucky’s February 22, 1999, comments on EPA’s NO_x SIP Call; and
- Applying a prorated 1995 to 2007 growth factor to provide a 1997 to 2007 growth factor to grow 1997 ICE NO_x emissions to 2007. On February 22, 1999, Kentucky provided to EPA 1997 NO_x emissions for ICEs instead of 1995 data since the Division’s 1997 data was much more comprehensive. At that time the inventory contained ICEs that were missing from previous inventory years. As reflected in the January 31, 2002, SIP revision (See Appendix B), EPA replaced Kentucky’s 1997 emissions for three ANR Pipeline large units (107-0134 units 02 1, 02 2, and 03 1) with 1995 data reclassifying one ICE (02 (707) 2 (1)) as small and identifying a Jefferson County ICE (111 0223 001-2) as a large ICE. Given these and other inventory differences and based on a July 12, 2005, consultation with EPA, the Division is utilizing the list of large ICEs and the 1997 emissions that the Division originally provided to EPA on February 22, 1999 (See Appendix B for Non-EGU documentation). In addition, based on information obtained from the Louisville-Metro Air Pollution Control District, the Jefferson County unit (111 0223 001-2) was not large based on 1995 or 1997 data. The Jefferson County ICE in

question is actually comprised of nine separate small ICE engines none of which are > 1 ton of NOx per average ozone season per day (See Appendix B). 1997 emissions data for the nine Jefferson County ICEs obtained from the District has been utilized and reflected in Appendix B. As previously indicated in consultation with EPA, all Division and updated Jefferson County 1997 ICE emissions (SIC 4922) in Kentucky's Non-EGU NOx SIP Call inventory were grown to 2007 using a 1997 to 2007 growth factor that was determined based on prorating EPA's 1995 to 2007 growth factor (See Appendix B).

~~In accordance with the lower court ruling of March 3, 2000, the Cabinet has removed the control for the ICE units and recalculated the Non-EGU budget absent controls for these sources. In addition, The Cabinet reserves the right to make changes to the budget for the large ICE this category in the event that it is determined that this budget needs further revision the actual emissions are larger than those estimated by EPA.~~

~~2.3 Budget for Stationary Area Sources*~~

~~No controls have been applied to these sources. Therefore, the budget is unchanged from that provided by EPA (31,807 tons). It should be noted, however, that the Cabinet reserves the right to make changes to the budget for this category in the event that the actual emissions are larger than those estimated by EPA.~~

~~2.4 Budget for Nonroad Mobile Sources*~~

~~No controls have been applied to these sources. Therefore, the budget is unchanged from that provided by EPA (15,025 tons). It should be noted, however, that the Cabinet reserves the right to make changes to the budget for this category in the event that the actual emissions are larger than those estimated by EPA.~~

~~2.5 Budget for Highway Mobile Sources*~~

~~No controls have been applied to these sources. Therefore, the budget is unchanged from that provided by EPA (53,268 tons). It should be noted, however, that the Cabinet reserves the right to make changes to the budget for this category in the event that the actual emissions are larger than those estimated by EPA.~~

~~*Hard copies of the Stationary Area, Nonroad Mobile, and Highway Mobile budgets have not been included due to the fact that no changes were made to these budgets. Additionally, an electronic version of Kentucky's NOx SIP Call Plan and relevant attachments can be found on the Division for Air Quality's web site at:~~

~~www.nr.state.ky.us/nrepc/dep/daq/pubinfo/calendar.html.~~

3.0 Initial NO_x Allocations for Kentucky's EGUs and Non-EGUs (2004-2006)

The initial NO_x allocations for EGUs and Non-EGUs are provided in Attachment 3 and Attachment 4 respectively (*Go to www.nr.state.ky.us/nrepe/dep/dag/pubinfo/calendar.html for an electronic copy of Attachments 3 and 4*). An explanation of how the Cabinet determined these allocations for each of these categories is provided below.

In addition, to the initial allocation, eligible sources may also request NO_x credits from Kentucky's compliance supplement pool in accordance with the criteria set forth in 401 KAR 51:180, NO_x credits for early reduction and emergency. Kentucky's compliance supplement pool has credits equal to thirteen thousand five hundred twenty (13,520) tons of NO_x.

3.1 EGU NO_x Allocations

Kentucky EGU NO_x allocations were determined in accordance with 401 KAR 51:160, NO_x requirements for large utility and industrial boilers. Specifically, Section 4 of this regulation provides the methodology for the allocation of NO_x allowances to EGUs. Section 4 (2)(a) divides the total number of NO_x allowances allocated by the Cabinet into separate pools for existing and new units. For the initial 2004-2006 allocation period ninety-five (95) percent of the total NO_x allowances will be allocated to existing units and five (5) percent will be allocated to new units. For each allocation period beginning with 2007-2009, ninety-eight (98) percent of the total NO_x allowances will be allocated to existing units and two (2) percent will be allocated to new units.

3.1.1 EGU NO_x Allocations for Existing Units

Initial NO_x allocations for existing EGUs were determined in accordance with 401 KAR 51:160 as follows:

1. Based on the average of the two highest amounts of the unit's heat input from the three most recent control periods (i.e., 1998, 1999, and 2000 for the 2004-2006 allocation period). In cases where no acid rain heat input data was available for an existing unit, the Cabinet utilized the best available data. Additionally, in situations where existing units have only one recent year of heat input data available because they recently commenced commercial operation no averaging of heat input information was performed.
2. The average of the two highest heat inputs was multiplied by the .15 lb/MMBTU or the permit limit, whichever is less.
3. Since the initial total EGU NO_x allowances did not equal ninety-five (95) percent, for the 2004-2006 allocation period, of the total number of tons of NO_x allowances (i.e., emissions) in Kentucky's EGU trading program, the Cabinet was required to adjust the number of allowances to equal ninety-five (95) percent of the trading budget.

4. ~~This adjustment was made by multiplying each unit's allocation by the result of ninety-five (95) percent, for the 2004-2006 allocation period, of the total EGU trading budget divided by the total number of initial EGU allowances. If this adjustment is necessary for subsequent allocation periods for existing EGUs then ninety-eight (98) percent will be applied for the adjustment.~~

~~The total budget for EGUs is thirty-six thousand five hundred four (36,504) tons. The total budget for EGUs in the trading program is thirty-six thousand forty-five (36,045) tons. Five (5) percent of the EGU trading program budget has been reserved for new source growth (set-asides). The new source set-asides number amounts to one thousand eight hundred three (1,803) tons. The remaining ninety-five (95) percent of the EGU trading program budget, thirty-four thousand two hundred forty-two (34,242) tons, has been divided among the existing EGUs (See Attachment 3 regarding the EGU NOx Allocations).~~

Total budget for EGUs (Revised)	36,504 tons
Budget for EGUs in trading program	36,045 tons
EGU Set-asides for new source growth	1,803 tons
Total budget for EGUs in trading program (minus set-aside)	34,242 tons

3.1.12 Portion of EGU NOx Allocations for New Units to Be Sold

Pursuant to an amendment to 401 KAR 51:160 on December 18, 2002, five (5) percent of the EGU NOx allocations for the 2004-2006 allocation period were sold by the Commonwealth of Kentucky and two (2) percent of the EGU NOx allocations for the 2007-2008 allocation period will be sold by the Commonwealth of Kentucky with proceeds deposited in Kentucky's general fund.

~~Allocation requests from qualifying new EGUs from the five (5) percent set-aside pool in 2004, 2005, 2006, or two (2) percent thereafter, will be addressed in accordance with 401 KAR 51:160 as follows:~~

1. ~~Allocation requests for more than the current annual control period beginning in 2004 shall be limited to the years in the current allocation period. Therefore, an allocation request cannot cross-over allocation periods. As appropriate, an additional request for allocations can be made to the Cabinet for additional control periods included in the next allocation period.~~
2. ~~Within sixty (60) days of receipt of a NOx allowance allocation request, the Cabinet must take appropriate action and shall notify the U.S. EPA and the NOx budget units of the number of NOx allowances allocated for the control period to the NOx budget unit. Therefore, the Cabinet will begin accepting requests for new set-aside allowances only beginning February 1, 2004, and February 1 of each year thereafter.~~
3. ~~Any allocation request submitted to the Cabinet shall be considered "received" at the close of business on each workday.~~
4. ~~Allocations shall be made to all requests as long as there are enough NOx allowances in the set-aside pool to satisfy the requests.~~

5. ~~Should the number of allocations in the set aside pool be less than the number of requests received at the close of business on a workday, each EGU will receive a pro-rated allowance based on the following formula:
$$\frac{\{(\text{Number of allocations requested by each EGU on that workday}) / (\text{Total number of EGU allocations requested on that workday})\} \times \text{Number of allocations left in the EGU set aside pool.}}{1}$$~~
6. ~~Once an allocation set aside pool for a control period has been depleted of all NOx allowances, the Cabinet shall deny, and shall not allocate any NOx allowances pursuant to a NOx allowance allocation request under which NOx allowances have not already been allocated for the control period.~~

3.2 Non-EGU NOx Allocations

Pursuant to the exemption and removal of the FCCU CO boilers from Kentucky's NOx SIP Call requirements, Kentucky Non-EGU NOx allocations for the 2007-2008 allocation period will be determined utilizing the revised Non-EGU trading budget (64 ozone season tons) provided in this SIP revision. Draft Kentucky Non-EGU 2007-2008 NOx allocations that utilize the revised Non-EGU trading budget (64 ozone season tons) are included in Appendix C. In addition, the draft Non-EGU NOx allocations for 2007-2008 are available at the following Division for Air Quality web link:

<http://www.air.ky.gov/news/Kentucky+2007-2009+NOx+Allocations.htm>.

~~Kentucky Non-EGU NOx allocations were determined in accordance with 401 KAR 51:160, NOx requirements for large utility and industrial boilers. Kentucky Non-EGU NOx allocations were determined in accordance with 401 KAR 51:160, NOx requirements for large utility and industrial boilers. Specifically, Section 4 of this regulation provides the methodology for the allocation of NOx allowances to Non-EGUs. Section 4 (2)(b) divides the total number of NOx allowances allocated by the Cabinet into separate pools for existing and new units. For each allocation period ninety-eight (98) percent of the total NOx allowances will be allocated to existing units and two (2) percent will be allocated to new units.~~

3.2.1 Non-EGU NOx Allocations for Existing Units

~~Initial NOx allocations for existing Non-EGUs were determined in accordance with 401 KAR 51:160 as follows:~~

1. ~~Based on the average of the two highest amounts of the unit's heat input from the three most recent control periods (i.e., 1998, 1999, and 2000 for the 2004-2006 allocation period). In cases where no acid rain heat input data was available for an existing unit, the Cabinet utilized the best available data. Additionally, in situations where existing units have only one recent year of heat input data available because they recently commenced commercial operation no averaging of heat input information was performed.~~
2. ~~The average of the two highest heat inputs was multiplied by the .17 lb/MMBTU or the permit limit, whichever is less.~~

3. ~~Since the initial total Non-EGU NOx allowances did not equal ninety-eight (98) percent, for the 2004-2006 allocation period, of the total number of tons of NOx allowances (i.e., emissions) in Kentucky's Non-EGU trading program, the Cabinet was required to adjust the number of allowances to equal ninety-eight (98) percent of the trading budget.~~
4. ~~This adjustment was made by multiplying each unit's allocation by the result of ninety-eight (98) percent, for the 2004-2006 allocation period, of the total Non-EGU trading budget divided by the total number of initial Non-EGU allowances. If this adjustment is necessary for subsequent allocation periods for existing Non-EGUs then ninety-eight (98) percent will continue to be applied for the adjustment.~~

~~The total budget for Non-EGUs is twenty-eight thousand seven hundred fifty (28,750) tons. The total budget for Non-EGUs in the trading program is one hundred seventy-nine (179) tons. Two (2) percent of the Non-EGU trading program budget has been reserved for new source growth (set-asides). The new source set-asides number amounts to four (4) tons. The remaining ninety-eight (98) percent of the Non-EGU trading program budget, one hundred seventy-five (175) tons, has been divided among the existing Non-EGUs (See Attachment 4 regarding the Non-EGU NOx Allocations).~~

Total budget for Non-EGUs (Revised)	28,750 tons
Budget for Non-EGUs in the trading program	179 tons
Non-EGU Set-asides for new source growth	4 tons
Total budget for Non-EGUs in the trading program (minus set-aside)	175 tons

~~3.2.2 Non-EGU NOx Allocations for New Units~~

~~Allocation requests from qualifying new Non-EGUs from the two (2) percent set-aside pool will be addressed in accordance with 401 KAR 51:160 as follows:~~

1. ~~Allocation requests for more than the current annual control period beginning in 2004 shall be limited to the years in the current allocation period. Therefore, an allocation request cannot cross over allocation periods. As appropriate, an additional request for allocations can be made to the Cabinet for additional control periods included in the next allocation period.~~
2. ~~Within sixty (60) days of receipt of a NOx allowance allocation request, the Cabinet must take appropriate action and shall notify the U.S. EPA and the NOx budget units of the number of NOx allowances allocated for the control period to the NOx budget unit. Therefore, the Cabinet will begin accepting requests for new set-aside allowances only beginning February 1, 2004, and February 1 of each year thereafter.~~
3. ~~Any allocation request submitted to the Cabinet shall be considered "received" at the close of business on each workday.~~
4. ~~Allocations shall be made to all requests as long as there are enough NOx allowances in the set-aside pool to satisfy the requests.~~

5. ~~Should the number of allocations in the set-aside pool be less than the number of requests received at the close of business on a workday, each Non-EGU will receive a pro-rated allowance based on the following formula:~~

~~$$\left[\frac{\text{Number of allocations requested by each Non-EGU on that workday}}{\text{Total number of Non-EGU allocations requested on that workday}} \right] \times \text{Number of allocations left in the Non-EGU set-aside pool.}$$~~

6. ~~Once an allocation set-aside pool for a control period has been depleted of all NO_x allowances, the Cabinet shall deny, and shall not allocate any NO_x allowances pursuant to a NO_x allowance allocation request under which NO_x allowances have not already been allocated for the control period.~~

4.0 Kentucky's Legal Authority

Kentucky's statutory authority for promulgation of the Division for Air Quality's regulations pertaining to the NOx SIP Call is as follows:

4.1 Legal Authority

KRS 224.10-100, 224.20-100, 224.20-110, 224-20-120,
40 CFR 51.121 as amended at 65 FR 11222 (March 2, 2000), 51.122, 72.2, 75.1, 75.2, 75.4,
75.11 to 75.13, 75.17, 75.19, 75.20, 75.24, 75.70, 75.72, 75.74, 75.75, Part 96, and
42 USC 7410.

4.2 Kentucky's NOx SIP Call Regulations

~~401 KAR 51:001. Definitions for 401 KAR Chapter 51.
401 KAR 51:160. NOx requirements for large utility and industrial boilers.
401 KAR 51:170. NOx requirements for cement kilns.
401 KAR 51:180. NOx credits for early reduction and emergency.
401 KAR 51:190. Banking and trading NOx allowances.
401 KAR 51:195. NOx opt-in provisions.~~

~~(Note: 401 KAR 51:200 Regional NOx emission requirements was inadvertently listed and submitted in the October 10, 2001, submittal, and is not part of Kentucky's NOx SIP Call SIP revision. Furthermore, this regulation is to be repealed since its purpose (i.e., the Louisville attainment demonstration) is no longer relevant with the redesignation of the Louisville area to attainment.)~~

Regulations to be Adopted and/or Amended per this SIP revision:

- 401 KAR 51:150. NOx requirements for stationary internal combustion engines. (Proposed for Adoption).
- 401 KAR 51:160. NOx requirements for large utility and industrial boilers. (Proposed Amendment).

See Appendix A for copies of the proposed regulations for adoption and amendment and at the following Division for Air Quality web site:

http://www.air.ky.gov/homepage_repository/Public+Hearings.htm.

For copies of other Kentucky's NOx SIP Call regulations, please see ~~Appendix A~~ or on the following internet link at www.lrc.state.ky.us/Title401.htm.

5.0

Public Participation

A public hearing to receive comments ~~regarding~~ on proposed revisions to Kentucky's State Implementation Plan (SIP) and Air Quality Regulations that address the federal NOx SIP Call ~~Kentucky's NOx budget demonstration and initial source allocations concerning EPA's NOx SIP Call~~ will be ~~was~~ conducted on October 21, 2005, ~~November 19, 2001~~. A copy of Documentation regarding the public hearing notice regarding this SIP revision concerning the NOx SIP Call and responses to comments received during the public comment period is included in Appendix D and located on the Division for Air Quality's web site listed below. Responses to comments received during the public comment period will be included in Appendix D in a subsequent submittal to EPA after the public hearing.

http://www.air.ky.gov/homepage_repository/Public+Hearings.htm.
~~www.nr.state.ky.us/nrepc/dep/daq/pubinfo/calendar.html~~